Test Report
Aggregate Gradation

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Mix Type	Granular sub Base
Contractor	Sri N Rajanna
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	bay
Material	Coarse Aggregates
Sample No	1
Date	20-Mar-2019

Weight of Sample: 4000 gms

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	75	0.00	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Specification for GSB
2	53	399.00	9.98	9.98	90.02	80-100	
3	26.5	704.00	17.60	27.58	72.42	55-90	
4	9.5	897.00	22.43	50.01	49.99	35-65	
5	4.75	393.00	9.83	59.84	40.16	25-55	
6	2.36	399.00	9.98	69.82	30.18	20-40	
7	0.425	701.00	17.53	87.35	12.65	10-15	
8	0.075	397.00	9.93	97.28	2.72	<5	

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Note:

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Test Report
Liquid and Plastic Limit by Cone Apparatus

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Mix Type	Granular sub Base
Contractor	Sri. N. Rajanna
Test Method	Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	Bay
Material	Coarse Aggregates
Sample No	1
Date	20-Mar-2019

Sl No	Description	Unit	Liquid Limit	Plastic Limit
	Penetration	mm		
1	Container No	no		
2	Weight of container,(A)	gm		
3	Weight of container + wet soil, (B)	gm	**Non Plastic**	**Non Plastic**
4	Weight of container + dry soil, (C)	gm		
5	Weight of water, D=(B - C)	gm		
6	Weight of dry soil, E=(C - A)	gm		
7	Water Content, D/E x 100 (%)	gm		

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Comments: <6 so Non Plastic

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Test Report
Field Density Test by Sand Replacement Method

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Mix Type	Granular sub Base
Contractor	Sri. N. Rajanna
Test Method	IS: 2720 (Part - 16) 1965 & Specification for Road & Bridge Works,
Location	Bay
Material	Granular sub Base
Sample No	1
Date	20-Mar-2019

Test Hole No	1
MDD	2.24
OMC in %	3.2
Bulk Density Ys	1.392
Weight of Sand In cone W1 (gm)	1195
Weight Of Wet soil From Hole (W2)	4435
Wt Of Sand +Cylinder Before Pouring (W3)gm	17000
Wt Of Sand +Cylinder After Pouring (W4) gm	13120
Wt Of Sand In Hole W5 = W3 - W4- W1 (gm)	2685
Volume of Hole V= W5/ Ys	1928.88
Bulk Density Yb= W2/V (gm/cc)	2.30
Moisture Meter Reading (%)	1.52
Moisture Content w (From Graph In %)	3.34
Dry Density Yd = Yb/(1+W/100)	2.22
Field Compaction(%)	99.33

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Test Report
Consistency test

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. N. Rajanna
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works. MORT&H. Rev-V.
Location	At Site
Material	Cement
Sample No	1
Date	6-Apr-2019

Sl. No.	Description	Trial 1	Trial 2	Trial 3	Trial 4	Trial 4
1	Weight of Cement	400	400	400	400	400
2	Percentage of water added (%)	28	28.5	29	30.4	31.5
3	Weight of Water (gm)	112	114	116	121.6	126
4	Initial Reading of Plunger (mm)	40	40	40	40	40
5	Difference (mm)	18.1	17	12	6.2	5.5

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Results: Standard Consistency of Cement: 31.50%

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Test Report
Fineness test

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. N. Rajanna
Test Method	IS : 4031 (Part 5) - 1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At site
Material	Cement
Sample No	1
Date	6-Apr-2019

Sl. No.	Determination	Trial 1	Trial 2
1	Weight of Cement before sieve (gm)	100	100
2	Weight of residue retained on 90um sieve (gm)	3	2.9
3	Percentage retained (%)	3	2.9
4	Average Percentage retained (%)	2.95	

Results: Residue of cement is: 2.95%

Comments: Maximum allowable residue by mass for ordinary portlad cement is 10%

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Test Report
Soundness test

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. N. Rajanna
Test Method	IS : 4031 (Part 3) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At Site
Material	Cement
Sample No	1
Date	6-Apr-2019

Sl. No.	Description	Trial 1	Trial 2	Trial 3
1	Initial Distance between the indicator points of Lechatelier mould	10	11	10
2	Final Distance between the indicator points of Lechatelier mould	15	13	14
3	Difference or expansion	5	2	4
4	Average Differences or Expansion in mm	3.67		

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Results: Difference in Expansion of Cement: 3.67mm
Comments: Maximum allowable Expansion of cement is 10mm.

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Test Report
Water absorption test

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. N. Rajanna
Test Method	IS : 2386 (Part - 3) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Coarse aggregates
Sample No	1
Date	6-Apr-2019

Sl. No.	Particulars	Computations	Test Numbers		Mean
			Test 1	Test 2	
1	Weight of SSD sample	W_1 g	765	765	
2	Aggregates Immersed in	W_2g	2055	2060	
3	Weight of Saturated Aggregate in water	W_sg = W_2- W_1	1290	1295	
4	dry aggregate in Air	W_3 g	2090	2085	
5	Volume of the Aggregate	W_3- W_s	800	790	
6	Aggregate	W_4g	2051	2056	
7	Specific Gravity	W_4/(W_3- W_s)	2.56	2.60	2.58
8	Apparent Specific Gravity	W_4/(W_4- W_s)	2.70	2.70	2.70
9	Water Absorption	(W_4- W_3)*100/ W_4	1.9	1.41	1.66

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Comments: Maximum allowable Aggregate Water Absorption value for PCC is 2.0%.

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Test Report
Impact test

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Mix Type	Plain cement concrete(1:4:8)
Contractor	Sri. N. Rajanna
Test Method	IS : 2386 (Part - 4) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At Site
Material	Coarse aggregates
Sample No	1
Date	6-Apr-2019

Sl. No.	Determination	Unit	Trails	
1	Weight of empty cylinder, w1	gm	960	960
2	Weight of container filled with Aggregate, w2	gm	1373	1321
3	Weight of the Aggregate before compaction, (w2 - w1) = w3	gm	413	361
4	Weight of the sample passing through 2.36 mm IS sieves after Impact, w4	gm	81	77
5	Weight of the sample retained on 2.36 mm IS sieve after Impact, w5	gm	332	284
6	Aggregate Impact Value (w4 / w3)x100	%	19.61	21.33
7	Specified Limit	%	45.00	

Results: Average Aggregate Impact Value: **20.47** %

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Test Report
Kerb stone

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Contractor	Sri. N. Rajanna
Location	Bay
Material	Kerb stone
Sample No	1
Date	26-Apr-2019

SL.NO	Failure Load in KN	CHARACTERISTIC COMPRESSIVE STRENGTH, fck , in, N/Sq.mm	AVG CHARACTERISTIC COMPRESSIVE STRENGTH, fck in N/Sq.mm	REMARKS
1	490	16.90	16.77	
2	486	16.80		
3	485	16.60		

Results: Compressive strength of kerb stone is 16.77 N/mm2

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Test Report
Interlock pavers

Project Name	Intimation of work order to start the work of Improvements roads and footpath in ward no.02 of Yelahanka Sub Division.
Client	Executive Engineer, Yelahanka Division
Job No	TFU/BBMP/EE/YNK/PMC/W-2/P-3296/2018-19/01/QR
Contractor	Sri. N. Rajanna
Location	Bay
Material	Interlock pavers
Sample No	1
Date	14-May-2019

SL NO	DETAILS	FLEXURAL STRENGTH fcr in mpa	CHARACTERISTIC COMPRESSIVE STRENGTH, fck , in, N/Sq mm	AVG CHARACTERISTIC COMPRESSIVE STRENGTH, fck in N/Sq mm
1	Paver Block	4.20	35.80	35.93
2	Paver Block	4.25	36.10	
3	Paver Block	4.10	35.90	

Results: s Compressive strength of Interlock pavers is 35.93 N/mm2

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